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ABSTRACT

To extend and modify university teacher education to meet the needs of noncertified special class teachers, to improve the classroom program and to provide the opportunity for certification, 26 teachers took part in a 2 year educational program. Formal course work was combined with internship activities in which actual classroom assistance was provided by university or school system personnel. Case studies were used for study and actual practice. As a result of this program all teachers were certified; the merging of formal courses and internship was successful in 24 out of the 26 cases; and problems were dealt with generally in classes and more specifically by classroom visits. Alternative teaching methods and materials were explored, and most of the group came to value a functional curriculum and the development of new skills based on sequential steps. References, an appendix, and a list of tables are included. (Author/JM)

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IN-SERVICE PROGRAM FOR TEACHERS OF EDUCABLE MENTALLY RETARDED CHILDREN

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Department of Health, Education, and Welfare

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SUMMARY

Teachers assigned to Special Education programs for the educable mentally retarded who were working toward certification in Special Education were given an in-service program to provide a format for integrating formal, in-service and intern-teaching experiences. Problems common to the teachers in their teaching assignments served as a basis for extensive study and discussions in the formal courses. Alternative instructional strategies were explored.

Twenty six participants completed the program. Pre- and Post evaluation was conducted on formal and informal measures. Teaching behavior change was apparent in the majority of the participants.

INTRODUCTION

Educators involved in public school programs for mentally retarded children and the preparation of teachers for these programs are acutely aware of the need for competent teachers and teacher candidates. There is a continuing effort to prepare teachers at undergraduate and graduate levels and also a need to provide additional work for in-service teachers who are not fully qualified for their special education assignment.

Local public school systems are faced with the problem of staffing expanding numbers of programs for mentally retarded children. State departments of education are concerned with improving the quality of the educational preparation of teachers in the classrooms and have set up certification requirements to serve as minimal guidelines as well as to provide program guidelines for local administrators.

The local needs, state requirements, and general concern of all professionals to improve the quality of instruction in special classes for educable mentally retarded children have raised concern among educators for determining means of providing relevant understandings and competencies of teachers. It is recognized that the responsibilities and the task reach beyond the scope of undergraduate pre-service programs, summer short courses and the traditional graduate programs. The needs of in-service teachers who are not certified in Special Education for more information and skills to assist them in their instructional responsibilities must be met.

The same program may not necessarily be appropriate for both the pre-service, and in-service teacher. The question is raised as to whether a different approach or pattern can be beneficial, if not essential, for meeting the needs of the in-service, non-certified teacher assigned to classes of retarded children.

In an attempt to answer this question the current study was designed to bring a different dimension to in-service education for the non-certified teacher. A demonstration project was developed which included a formal course sequence to run concurrently with in-service internship under the supervision of a university coordinator while the teacher was employed in the cooperating school system. The internship was to provide the practical aspect to meet immediate teacher needs as well as provide a laboratory for application of the concepts provided in the formal course offerings. It is hoped that this project may provide further guidelines to efforts to improve in-service teacher preparation programs in cooperation with the public schools.

Included in this report is a description of the purposes of and procedures used in the demonstration project for Maryland in-service teachers, a report of results of the project, and a discussion of the implications of such a project.

I. Problem

The major problem with which the project is concerned is three-fold. The project is designed to extend and modify the University teacher education services to meet the needs of in-service, non-certified special class teachers, to improve the continuing classroom instructional program, and to provide the opportunity for participants to become certified special education classroom teachers in the area of the mentally retarded.

It has been noted that the particular needs of the in-service, non-certified special class teacher may not be fully met by the traditional University teacher education services. The personal situations of many individual teachers in classrooms mitigate against full time study or associated supervised internships. The University extension courses and/or summer session courses and workshops which are available to in-service teachers often provide only minimal opportunity for guided practical application of formal course content.

The shortage of fully prepared instructional personnel has also mitigated against the realistic administrative policy of employing only fully certified special education teachers. This problem is the familiar one in education of demand greatly exceeding supply.

At the initiation of this project, there were reported to be 15,798 such children enrolled in 804 classes throughout the State. Of this number, Baltimore City had 10,824 children in 463 classes with the remainder of the total reported distributed in the 23 counties within the State. One county reported no public school classes for educable retarded children. Four counties reported one class. Communication from the State Department indicates that even the counties adjacent to the metropolitan areas of Baltimore City and Washington, D. C. with the heaviest centers of population, were not meeting the needs for placement of educable retarded children (Baltimore County has 1,585 children in 128 classes; Montgomery County had 997 children in 90 classes; Prince Georges County has 823 children in 47 classes.)

An important phase of the project involves evaluation of the teacher internship - coursework program as a means of meeting these problems. The dimensions surveyed to evaluate success in meeting these problems include teacher attitudes, and knowledge of the mentally retarded, as well as curriculum design, and instructional methods and materials used in the classroom.

DEFINITIONS

Experiment and/or Project Group - Refers to the group of twenty-six Special Education teachers who met the criteria as defined under Population (Pg. 7) and participated in the total project experience.

Control group - Refers to the groups of fifteen Special Education teachers who met the criteria as defined under Population. They did not participate in the in-service project coursework nor in the internship, although they did take University coursework at other centers.

Internship - Participation by the project teachers (experimental) in classroom visitations and consultation with project staff who provided assistance in organization and implementation of classroom and individual child programs.

In-service coursework - Refers to a four course sequence in which project teachers participated. The four courses included: An Introduction to Special Education, Characteristics of Exceptional Chiodren - Mentally Retarded, Education of Exceptional Children - Mentally Retarded, Curriculum for Exceptional Children - Mentally Retarded.

Observational Record Form - Standard checklist developed for the purpose of structuring the collection of observational data.

II. Review of Literature

A survey of the literature indicates there has been no report of similar demonstration projects concerning in-service internship programs for preparation of teachers of educable mentally retarded children.

Critical questions have been raised regarding the effectiveness of teaching in classes for mentally retarded children and the need of changes in teacher education, (Cain, 1964). It has been stated by Hilgard (1965) that, in spite of efforts to study the teaching process we know very little about the complicated set of relationships which result in effective teaching. The concern regarding teacher preparation and effective teaching implies continued study.

A review of the studies of teacher attitudes and teacher-pupil interaction in the area of education of the mentally retarded has been reviewed as pertinent to the present study. DeGroat and Thompson (1952) studied sixth graders' responses on approval and disapproval scales and demonstrated that the students were able to make stable and consistent evaluations of the approval and disapproval tendencies of their teachers. Children who were considered by their classmates to be experiencing a high degree of teacher approval coupled with a low or moderate degree of disapproval were better students and were better adjusted than their less-favored classmates.

In a report Wandt (1952) concluded that evidence in assessing total teacher personalities supported the hypothesis that at-

titudes toward groups in schools can be measured by direct attitude levels. Among other related variables there is a discernible relationship between verbalized attitudes and overt classroom behavior of teachers. These verbalized attitudes may be measured indirectly by means of disguised items.

Harris (1956) using a two year case study technique reported on the effects of a predominantly permissive atmosphere. Her technique of evaluation indicated that of twenty-six attitudes observed for 154 hours, twenty-two showed positive change while four showed regression. In a second study (Harris, 1958) of four year duration further results were reported and the case study method of treating and measuring behavior.

As part of a study of attitudes toward various types of exceptional children, including the retarded, Haring, et al (1958) reported on methods for modification of attitudes. In the conclusions of the study it was reported that teacher attitudes were modified in the direction of increased acceptance. The attitude change did not influence a more realistic approach to educational placement. Although there was a change of attitudes no changes in basic personality structure was noted. For effective results attitude changes occur when actual experiences and contact with exceptional children are provided.

James and Gottfried (1962) presented information on the expressed preference of pre-service teachers for teaching various types of exceptional children. They found that definite patterns, which can be identified, exist. Three interest clusters were found related to the preferences indicated.

From the review of reports on teacher attitudes it can be assumed that attitudes can be identified, change in attitudes can occur when information is presented and contact with students is provided and these attitudes are perceived by the students and effect their learning behavior in the classroom.

In addition to the literature related to teacher preparation and teacher attitudes which was reviewed for background information, studies of the characteristics of retarded children, curricula, methods and materials were surveyed and reviewed during the formal course phase of the project. Bibliographies were compiled from the Bibliography of World Literature on Mental Retardation and the Education Index.

III. Population

The classes were selected from various sections of Anne Arundel County, Maryland whose Department of Special Education agreed to cooperate with the study. Anne Arundel County which ranges from

highly suburban to highly rural in nature, is typical of the structure of most of the counties of Maryland (with the exception of the sparsely populated highly rural ones to the south and west). The teacher population is also relatively typical of the State (with the exception noted above). It is felt, therefore, that findings from this project can be conservatively generalized to other school systems and University programs in this and other geographical areas.

Since the format of the project was considered applicable at all levels of special class programming, non-certified teachers of educable mentally retarded children from primary, intermediate, junior and senior high classes were included in the population.

In addition to representing various population density levels and chronological age levels, the teacher sample was selected from a population which met the following criteria:

1. Had earned an AB or BS degree in education. (Eligibility for admission to the Graduate Program of the University of Maryland was not a selection factor.)

2. Were currently assigned or were to be assigned to a classroom of educable mentally retarded children on the basis of their own request or assent.

3. Were certified in elementary or secondary education but not special education.

4. Indicated an interest in pursuing a two-year program including formal course work for graduate credit and/or for state certification, participation in in-service groups and teaching with supervised assistance. An intention to continue throughout the length of the program was requested.

5. Were recommended by their school system as potentially strong career teachers of the mentally retarded.

6. Were serviced by resource persons and supporting service personnel. School system personnel cooperating with the project included:

Supervisors of special education classes
Psychologists assigned to special education
Speech Therapists
Special area teachers in physical education, arts and crafts, and music
Administrators of the schools which special classes were assigned.

Characteristics of subjects

The student sample included the twenty-six populations, consisting of the total enrollment within each class. The pupil en-

rollment consisted of from ten to fifteen children per class. The classification of the children was within the ability range of educable mentally retarded, (IQ 50-80). The chronological ages were from 6 to 20 years.

The twenty-six experimental teachers ranged in age from 22 to 60 years, with a median age of 36. There were 23 females and 7 males in the group. The total number of years of teaching experience ranged from .5 to 25 years for the thirteen elementary level teachers and from 1 to 30 years for the thirteen secondary level teachers.

The majority of the teachers initiated their own assignment to special education classes, while five agreed to accept a special assignment suggested by their supervisors or administrators. A more detailed summary of this information is provided in Table I.

TABLE I

Reason for Initial Assignment to Special Education Class

Total number requesting assignment			17
Reason:	Previous experience with slow learners	6	
	Interest in learning variation	3	
	Could make worthy contribution	3	
	MR family member	2	
	Broaden understanding of children	1	
	Interest in psychology	1	
	Informal nature of class	1	
Total number not requesting assignment			9
Reason:	Asked, chosen by principal, supervisor	5	
	No reason	2	
	A need in the school	1	
	Only job offered	1	

All of the project teachers except one, who specialized in science, did their undergraduate work in education. Subsequent contact with retarded children and special education presented a variety of patterns. Over half of the experimental group had either formal or short term experience with retarded children prior to initiation of the project as shown in Table II.

TABLE II

Teacher Contacts With Retarded Children

Experiences in regular classrooms	8
Experiences in summer camps with retardates	4
Contact with neighbor children	3
Contact with relatives	1
No previous contacts	10
	N=26

Two-thirds of the teachers had taken previous special education courses, as indicated in Table IV, but had not completed certification requirements. Details of such prior coursework is shown in Table III.

TABLE III

Number of Teachers Completing Special Education Coursework Prior to Participation in the Project

Introduction to Special Education	14
Characteristics of Exceptional Children - Mentally Retarded	17
Education of Exceptional Children - Mentally Retarded	3
Curriculum for Exceptional Children - Mentally Retarded	2
Workshops	3

NOTE: The above figures are not mutually exclusive, as some individuals may have completed more than one course.

TABLE IV

Incidence of Frequency of Coursework Completed
By Teachers Prior to Project Participation

Frequency of Teachers Completing no course	4
Frequency of Teachers Completing one course	6
Frequency of Teachers Completing two courses	12
Frequency of Teachers Completing three courses	4
Total	26

NOTE: For purposes of this table, participation in a workshop has not been defined as completing a formal course.

A control group of fifteen teachers was also identified to provide comparative information. These teachers met the criteria of the experimental group with the exception that they were currently teaching in other school systems in adjoining areas of the state. Contact with the group was maintained through enrollment in the University special education courses offered at the Center only. No internship experiences were provided.

To provide background information for comparison to other groups and to assess the characteristics, attitudes and aspirations of the teachers various measures were used.

The Shipley-Institute of Living Scale was administered to both the experimental and control groups to determine their comparability on a measure of intelligence. The Stern Activities' index and the Edwards Personal Preference Scale were administered to the experimental group to gather more descriptive data regarding the teacher sample.

The Shipley-Institute of Living Scale yields a gross estimate of intelligence as measured by a Conceptual Quotient (CQ). The scale consists of a multiple choice vocabulary test and an abstract-thinking test. The scale may be administered in a group situation and requires less than a half-hour to complete. Impairment is measured by the extent to which the individual's abstract thinking falls short of his vocabulary. This deficit is expressed in the CQ measure. In ten studies comparing the Weschler Full Scale score and the Shipley Scale a range of correlations from .65 to .90 was computed.

Both the experimental group and control group was tested with the Shipley at the beginning of the two year project and the scores and conceptual quotient scores were obtained. Appropriate age corrections were made. (See Table V).

TABLE V

Shipley - Institute of Living Scale Scores
Comparison of Conceptual Quotients of Project and Control Teachers

	N	$\overline{X}$	SD
Project Teachers	26	94.69	15.91
Control Teachers	15	98.07	13.6
F ratio 1.4813			

The conceptual quotient of the project group had a mean of 94.69, SD 15.91. The control group's conceptual quotient mean was 98.07, SD 13.5. The F ratio between the groups was 1.4813, and the t-.6076. Neither score was significant. It can be assumed that the two groups were equivalent on their conceptual quotients.

The Stern Activities Index is an instrument which measures 30 manifest personality variables based upon Murray's need theory relative to the interpersonal and intrapersonal states of the individual. It is assumed that his personal needs will be reflected in his expression of potential interest or participation within a specific set of behavioral activities. Forty-two variables are included in the Activities Index.

Each teacher reacted to 300 items by indicating either a like or dislike for the subject or activity concerned. In comparison with the general undergraduate student norms which the Stern was standardized, the male teachers in the experimental group are relatively high in their interest in humanities and social science and in helping others (nurturance). The male and female teachers were low in thrill seeking activities. On other personality variables the project group compared favorably with groups previously studied.

The Edwards Personal Preference Schedule (EPPS) was given to the experimental group at the end of the internship program. Although it is designed primarily as an instrument for research and counseling purposes, it provides quick and convenient measures of 15 relatively independent normal personality variables. The statements in the EPPS and the variables that these statements purport to measure have their

origin in a list of manifest needs by H. A. Murray and others. The listing of the variables as used by Murray include Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intraception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality and Aggression.

In measuring these traits, the EPPS requires individuals to respond to pairs of statements regarding which statement is more characteristic of himself. Lang (1960), Garrison and Scott (1961) (1962), Gray (1962) and Hamacheck and Mori (1964) have used the EPPS to determine the needs, goals and personality characteristics of different education majors and teachers. It has been found to be a sensitive instrument in pinpointing personality traits.

Because of the small number of subjects in the experimental group, a closeness of fit 2 x 4 contingency table was constructed. A chi square was computed for each of the 16 personality variables on the EPPS comparing the project group with the standardization norms. The contingency table was divided into quartiles, with the f score 6.5.

As shown in Table VI the measurements of the two groups were different on the following variables which were significant at the .05 level: Achievement, Affiliation, and Intraception, while the Deference and Order variables were significant at the .01 level.

TABLE VI

Comparison of EPPS Scores of Project Teachers and Norm Population

EPPS Variables	Chi Square	Significance Level
1. Achievement	11.54	.05
2. Deference	22.92	.01
3. Order	28.48	.01
4. Exhibition	5.39	---
5. Antonomy	2.62	---
6. Affiliation	13.06	.05
7. Intraception	12.46	.05
8. Succorance	.47	---
9. Dominance	6.92	---
10. Abasement	5.08	---
11. Nuturance	3.84	---
12. Change	1.70	---
13. Endurance	8.77	---
14. Heterosexuality	5.68	---
15. Aggression	6.31	---
16. Consistency	5.39	---

In the five categories in which significant scores were obtained, with the exception of affiliation, the project group's differences were in the positive direction. Affiliation was negatively significant. The category is purported to measure loyalty to one's friends, to do things for friends, to form strong attachments, etc.

The experimental teachers appeared to be significantly more achievement oriented, show more deference, order and intraception than other groups studied in the norm populations. There was apparently less affiliation than in other reported studies of various groups.

METHOD

The University of Maryland Demonstration project was carried out in two continguously developing stages which extended over a two year period. The first stage included the formal course work related to the study of the characteristics of retarded children including the specific characteristics of pupils assigned to project teachers, and the method and curricula appropriate for mentally retarded children. The second stage continued the in-service-internship activities of providing assistance to facilitate the transfer of theory into actual classroom procedures.

The formal in-service course work, given simultaneously with the in-service-internship was modified to provide maximum involvement and carry-over into the classrooms. The learning and related characteristics of educable mentally retarded children and the specific characteristics of the teacher's assigned students were studied in light of comparisons with normal children of school age as reported in behavioral research. Educational implications were drawn from such studies. Curricula and teaching methodologies in current use with educable children were surveyed. The adaptations or revisions of such materials to meet the needs of the teachers in the classroom were made by the participating teachers individually, and/or in groups under the leadership of the University of Maryland personnel.

The internship provided actual classroom assistance to the teacher by the University and/or school system personnel. Emphasis was on the development of a total developmental program in both courses and in the school setting, but actual teaching methods, adaptation of materials and the use of the appropriate curriculum were given priority in the classrooms. Direct assistance in working with individuals or groups of children, demonstration of techniques, assistance with interpreting psychological and educational diagnosis, resource materials and advisory services were provided.

Information on four total classroom groups and selected individual children from other groups was assembled into case studies for use during the project. The four secondary level groups of children

studied were individually evaluated by a psychologist. The tests used included the Wechsler Intelligence Scale for Children (WISC) or Wechsler Adult Intelligence Scale (WAIS) as required by chronological ages, the Bender-Gestalt, Goodenough Draw-a-Man and selected other devices for individuals as indicated by responses. With elementary age children the Stanford Binet Scale was administered. The Illinois Test of Psycholinguistic Abilities (ITPA) was used for educational diagnosis for the selected children who were studied intensively. Achievement score data were collected from tests administered during county-wide testing. The case studies were used to facilitate the transfer of theory and discussions into actual classroom planning. An Observational Record Form was also developed to give some structure to the classroom visitations made by the coordinator. The record form was used to provide consistency to the type of data gathered from each classroom. (See Appendix I).

Data were collected on the classroom behavior and pupil-teacher interaction of each of the teacher-participants. Information on successful teaching procedures and materials used by the teachers was recorded on the standard observational record developed for the project.

Data were also secured prior to, during, and at the completion of the project regarding the educational background, characteristics, attitudes, and aspirations of the project teachers, through use of a pre and post response to the Parents Attitude Research Instrument (PARI) and, a pre and post response to the Attitudes Toward Mental Retardation Scale (AMR). Both the PARI and the AMR are designed as attitude measures.

For both the PARI and the AMR respondents are presented with statements to which they indicate whether they strongly agree, agree, disagree, or strongly disagree. Scoring is also similar for both instruments. Each response has a number value from one to four. Scoring tallies the total score for each category.

The Parental Attitude Research Instrument (PARI) is an inventory of attitudes toward child-rearing practices as they relate to parent and child personalities as well as parent-child relationships.

The instrument was developed by Drs. Earl S. Schaefer and Richard Q. Bell of the Section on Child Development, National Institute of Mental Health, Bethesda, Maryland. The description of the categories was delineated by Fliegler and Hebeler (1960). Satisfactory reliability estimates of internal consistency and test-retest were reported in the various categories. Most of the scales were developed through the selection of major operational concepts of child-rearing first, followed by the identification of specific trait-actions relative to the concept.

The categories and their descriptions are:

1. Encouraging Verbalization. Encouragement of expression, including differences of opinion; importance and value of opinions of children.

2. Fostering Dependency. Over-protection and over-possessiv--ness by the parent so that the child will not face disappointment, frustration and failure.

3. Seclusiveness of the Mother. Achieving gratification through home and family; denial of need for outside pursuits and interests; sublimation into the home-making role.

4. Breaking the Will. The need to instill fear and recognition of parental and general adult dominance in order to prevent malevolent and mischievous behavior.

5. Marital Conflict. The inevitability of marital tension and conflict.

6. Strictness. The desirability of the utilization of disciplinary measures which tend to develop a child who has good character and is happier.

7. Irritability. The difficult and "nerve-wracking" job of rearing children.

8. Excluding Outside Influences. The child is not permitted to question parental authority and dominance, either through insight or external influences (which might color the child's point of view toward the parents).

9. Deficiation of Parent. Reverence and unquestioning loyalty to the parent who may be regarded as infallible and wise.

10. Suppression of Aggression. The desirability and necessity for avoiding physically aggressive acts by parental (or other authority figures) decision or instruction.

11. Equalitarianism. The recognition by parents that their children should have equal status and rights through reciprocity in interaction.

12. Avoidance of Communication. A restriction or a non-committal attitude toward communication through the expression of hostility or anxiety.

13. Inconsiderateness of Husband. Assignation of blame for inadequacy in maternal role to neglect, lack of cooperation of husband; expression of desire for support, cooperation, understanding from husband.

14. Suppression of Sexuality. The restriction of sexual

concepts which may be elicited in curiosity, play or exposure.

15. Ascendancy of Mother. Role of competent and powerful mother in home management; effect upon family and individuals in the home.

16. Comradeship and Sharing. Closeness of the intra-familial relationship and desirability for reciprocal positive behavior which results in a more effective and a happier child.

17. Expression of Affection. The fulfillment of the need for protection and of support of the child by recognition of emotional needs; and importance of the individual in the familial constellation.

18. Autonomy of Child. Expression of recognition and desire of the parent for the child to act independently and apart from the parents.

19. Achievement. Desirability of goal-striving encouragement; parental role in motivation and control of child's activities; need for encouragement, goal extensions; importance of goal setting.

20. Martyrdom. Drawing attention to personal suffering, self-sacrifice; statement of lack of recognition, support and gratitude.

21. Fear of Harming the Baby. Expression of fear of hurting the infant in normal activities; reflection on resultant guilt if the infant is harmed.

22. Rejection of the Homemaking Role. Reaction to the restrictive aspect of homemaking and child-rearing role; expression of aggression or irritability toward motherhood.

23. Approval of Activity. The child is urged to consistently strive, keep busy, and not waste time in order to assure future success and happiness.

24. Intrusiveness. An awareness that the child has the ability and should be allowed to do thinking without subjection to parental pressure.

25. Acceleration of Development. Emphasized that parents try to start their child early in toliet training, walking and feeding.

26. Dependency. Statements regarding adequacy in performing child-rearing role; reaction to being left alone, independence in role performance.

The Attitude Toward Mental Retardation Scale (AMR) was developed by Fliegler and Hebeler at Syracuse University. It measures attitudes specifically related to the general areas affecting the

lives of parents of retarded children as derived from clinical observations. Its 256 items are categorized into 33 clusters each having four to sixteen items. Of these thirty-three categories, seventeen are original with the AMR while sixteen are derived from the PARI. The rewriting process involved only the insertion of the word "retarded" or "mentally retarded" before general references to "child".

The categories of the AMR Scale and their clinical descriptions are:

1. Sexuality. Suppression of knowledge, behavior, expression and function; focus on activities which infer or include suppression and expression of sexual awareness, excitation, behavior and function. These activities may culminate in marriage or procreation of inferior progeny.

2. Genetic Responsibility. Reference to hereditary causation, assignation or rejection of responsibility for the defective gene.

3. Appearance. Emphasis on physical appearance and capability for social responsibility.

4. Normalcy of Development. Concern with comparing retardates with normals in relation to social and emotional adjustment, understanding of self/world, and making a contribution to society.

5. Dependency. Suggests lack of initiative; recognition of helplessness and need for support and protection in home, vocational, and social aspects of living.

6. Independency. Includes initiative to sustain activity without support or protection; lack of felt or expressed need for ego assistance; and resistive avoidant reaction to dicta imposed by dominant figures.

7. Aggression. Stress on desirability and necessity of expression; suppression of implied or overt aggressive acts through verbal, physical or psychological media.

8. Guilt. Emphasis on anxiety and shame as reflected in the intra-familial reactions of fear and self-recrimination to retardation and related social ramifications from the community upon the family.

9. Peer Interaction. Relates to acceptance or rejection of/by normal and retarded peers which may/may not influence social infusion.

10. Concept of Retardation. Reference to general effects of retardation upon an individual's existence which highlight the severity and onus of the problem; conceptual framework about retardation and comparative reactions to other handicaps.

11. Abasement. Reflects feelings of insecurity through expression of personal inadequacy, and self-debasement for the retardate's inferior role in society and/or fear for the future.

12. Comprehension of Self/Others. Includes awareness of limitations; need for differentiation of standards and recognition of physical, social and intellectual characteristics.

13. Counteraction - Re-striving. Implies a desire to compensate or overcome feelings of inadequacy or failure by suppressing acceptance of limitations and re-striving to achieve.

14. Educational Implications and Treatment. Deals with eligibility, school placement, educational aspirations and goals, academic experiences.

15. Community Provision. Deals with feasible vocational and social placement which may indicate non-segregation or segregation from the community or family.

16. Emotional - Social Behavior. Includes general concepts of emotional needs and social and emotional patterns of reacting and distinctions between mental illness and retardation.

(For description of categories 17-33 see PARI section)

17.	Expression of Affection	(PARI - 17)
18.	Suppression of Sexuality	(PARI - 14)
19.	Encouraging Verbalization	(PARI - 1)
20.	Excluding Outside Influences	(PARI - 8)
21.	Avoidance of Communication	(PARI - 20)
22.	Suppression of Aggression	(PARI - 10)
23.	Deification of Parent	(PARI - 9)
24.	Comradeship and Sharing	(PARI - 16)
25.	Strictness	(PARI - 6)
26.	Breaking the Will	(PARI - 4)
27.	Irritability	(PARI - 7)
28.	Autonomy of Child	(PARI - 18)
29.	Equalitarianism	(PARI - 11)

30. Approval of Activity (PARI - 23)

31. Fostering Dependency (PARI - 2)

32. Acceleration of Development (PARI - 25)

33. Achievement (PARI - 19)

RESULTS

The major concern of the project was the evaluation of the internship-in-service coursework technique as a teacher education design for non-certified Special Education in-service teachers. The data relevant to this pursuit were collected via the observational record forms and the pre and post scores on the attitude measures. The findings from this collection are summarized in that order.

The total group received passing grades for all courses but the grades were not viewed as part of the project evaluation of teachers. The credits earned allowed each person in the group to fulfill necessary certification requirements. Each teacher was given credit for two successful years of teaching in special classes which helped complete the total requirements.

The internship portion of the project was evaluated by means of records which were kept by the coordinator of each classroom visit. The visits were summarized in an observation record (see Appendix I). The records assessed (1) classroom physical environment, (2) emotional climate and classroom behavior, (3) instructional organization and efficiency, (4) curriculum, (5) teaching methods and materials - elementary, (6) teaching methods and materials - secondary, (7) teacher-coordinator relationships. (See Table VII). The final observations are reported in the above order. The data are reported by frequency of occurrence along a five point continunm with the following representations: 1 - poor, 2 - below average, 3 - average, 4 - above average, 5 - excellent.

I. Classroom-Physical Environment

The classrooms visited presented a wide variety of learning environments. Twenty-four classrooms were were adequate to excellent in size, accessibility, workspace and in general physical requirements. Of these, 16 were large, spacious rooms which had been regular classrooms. Eight were less than regular size but were adequate for the smaller special class enrollment. Two classrooms were inadequate in size and accessibility, one a portion of a storeroom, the other a small converted teachers' lounge.

TABLE VII

Physical Environment of Project Teacher's Classrooms
As Reported by Frequency on Observational Record

	1	2	3	4	5
Adequacy of Size	2	0	8	10	6
Adequacy of Lighting	0	3	7	11	5
Quality of Acoustics	2	2	8	14	0
Adequacy of Ventilation	1	3	7	8	7
Adequacy of Workspace	1	4	10	7	4
Accessability	2	3	10	6	5
Attractiveness of Bulletin Boards (total of 3 items)	6	12	17	22	21
Attractiveness of Teaching Aids	0	3	10	7	6

II. Emotional Climate and Classroom Behavior

The general classroom atmosphere was found to be of a stimulating nature in eleven, average in twelve and dull in five classrooms. Pupil behavior was also observed on the basis of freedom of expression and movement, and self discipline. There were six groups of children who were felt to be excessively passive at the beginning of the project. An observed change toward more active participation was noted before the termination in two of the groups. Two groups had not learned behavioral controls, were disruptive to the class and school routines and were not adequately controlled by the teachers.

Teaching behavior was evaluated on classroom and self control, spontaneity of expression and movement, motivational ability and the ability to provide oral and written language models. On the final rating classroom control was below average to excellent in twenty-four rooms and poor in two classrooms. Teachers were good to above average in use of discussions and in freedom of movement in twenty classrooms and poor in six. Teacher encouragement of motivation to participate in activities was adequate to superior in

twenty classrooms and poor in six classrooms. Patterns in oral language and use of written communication differed widely from elementary to secondary level. Only two teachers were judged to be ineffective in use of oral and written language in their teaching.

TABLE VIII

Emotional Climate and Classroom Behavior of Project Teachers' Classrooms as Reported by Frequency on Observational Record

	1	2	3	4	5
General Classroom Atmosphere	5	4	8	6	5
Pupil's Freedom of Expression	4	2	8	8	4
Pupil's Freedom of Movement	3	3	7	9	4
Pupil's Self Discipline	4	5	7	5	5
Teacher's Classroom Control	1	1	9	8	7
Teacher's Freedom of Expression	6	7	8	3	2
Teacher's Freedom of Movement	4	2	8	7	5
Teacher's Motivation of Participation	3	3	8	7	5
Teacher's Self Control	3	5	8	6	4
Teacher's Oral Communication	2	9	10	3	2
Teacher's Written Communication	2	8	11	3	2
Cooperation Among Peers	4	2	8	8	4
Pupil-Teacher Shared Planning	6	7	8	5	0
Pupil-Teacher Shared Evaluation of Lessons	7	8	7	4	0

III. Instructional Organization and Efficiency

Instructional organization and efficiency were evaluated as to the presence or absence of long and short range planning, the appro-

priateness of independent activity assignments, the evaluative measures including objective measures and grading systems used by the teacher, the presentation of assignments and allowances for individual work rate, and meeting pupil needs for reinforcement. The use of well organized units was suggested by the coordinator and stressed by the course instructors and was accepted by most of the teachers who had not previously used them. In the final months of the project twenty-one teachers were using a modified unit presentation. There was no evidence of an attempt to integrate learning units in five classrooms. In these classrooms skills and content continued to be taught in isolation during rigidly allotted periods.

TABLE IX

Instructional Organization and Efficiency of Project Teachers as Reported by Frequency on Observational Record

	1	2	3	4	5
Appropriateness of Long Range Planning	2	3	6	10	5
Appropriateness of Daily Planning	4	5	11	4	2
Appropriateness of Daily Time Schedule	5	6	11	3	1
Adequacy of Time for Independent Activity	2	2	11	7	6
Adequacy of Level of Independent Activity	2	3	10	6	5
Adequacy of Presentation of Assignments	0	1	10	8	7
Adequacy of Evaluation of Assignments	0	2	9	9	6
Allowance for Individual Work Speed	2	2	11	5	6
Appropriateness of Use of Repetition	2	3	8	9	4
Appropriateness of Use of Homework Assignments	2	3	7	8	6

The use of appropriately designed independent activities, homework assignments when required by the administration, and the presentation of clear well defined assignments were emphasized in the courses and were considered crucial during the internship contacts. Practical suggestions were made where needed. The acceptance by the teachers was considered to be good and carry over was noted in most classrooms. In two classrooms no change was recorded.

The allowance for individual work rate of pupils, the use of appropriate repetition and individually designed remedial lessons were also emphasized in lectures and in the classrooms. Evaluations, both teacher and pupil, and the use of grades to motivate learning were stressed. Again there was acceptance by most of the teachers. Where administrative changes in grading systems were needed there was dialogue with the supervisors concerned.

Particular efforts were made to promote individual educational diagnosis. Teachers were encouraged to determine students' levels of reading and arithmetic skills and to determine strengths and weaknesses in each and to plan individually and for groups on the basis of the diagnosis. There was carry over in only a few classes of these techniques.

IV. Curricula

In considering the curricula, evaluation was based on whether selection considered individual needs and learning abilities, if community needs and vocational goals were included, if the rate and sequence of development were observed and if there was an analysis and division of the tasks into specific skills which could be taught. Teachers were encouraged to survey a number of guides in addition to the county guide which they had and to adapt and incorcoprate new ideas into their plans after carefully determining the needs of the children in their groups. As part of the existing county in-service program the teachers had begun to develop a guide.

Teaching methodology and use of materials were observed in each classroom. Since the elementary and secondary programs differed widely, efforts were made to record observations appropriate for each level.

V. Curricula Observations - Elementary Level

Information on the observations in elementary classrooms included general teaching procedures and the approaches used in teaching language arts; arithmetic, social studies, both in a general and specific manner. Genrally, it was recorded whether there were (1) balanced periods of quiet and/or intense study interspersed with activities requiring physical movements, (2) teacher-pupil planned activities, (3) combinations of lectures, demonstrations and use of

communications media, (4) balance in skill building and fostering of useful concepts, (5) emphasis on work habits and attitudes and encouragement toward independence, (6) controls through positive reinforcement rather than punitive measures, (7) evaluations of lessons and materials with pupils, (8) organization including developmental sequencing and integration of subject matter, and (9) structure with adequate flexibility in planning activities.

TABLE X

General Curricula for Projec- Teachers' Classrooms
As Reported by Frequency on Observational Record

	1	2	3	4	5
Frequency of Curricula Decisions Based on Individual Interests	1	2	12	8	3
Frequency of Curricula Decisions Based on Individual Assets And Disabilities	0	2	6	8	10
Frequency of Curricula Content Based on Community Needs	1	1	10	8	6
Frequency of Curricula Content Based on Vocational Goals	1	1	11	7	6
Frequency of Curricula Content Based on Future Citizenship	2	3	10	6	5
Frequency of Curricula Decisions Based on Rate of Developmental Sequence	1	5	14	4	2
Apprppriateness of Sequence	4	6	11	3	2
Frequency of Curricula Decision Based on Analysis of Principal Parts of Developmental Task	2	8	11	5	0
Frequency of Presentation of a Variety of Experiences Relating to Similar Concepts	2	5	12	5	2

As should be expected the variety of both teaching methods and materials was as varied as the number of teachers. In the area of

general methods, eteaching suggestions were made individually to the teachers following a visit or in response to questions. Most of the teachers readily accepted suggestions.

Specifically the texts and teaching devices used in each area were noted. These texts and devices were of the type traditionally found in public school special classes. If a combination of methods was used to individualize approaches for certain children or for small groups these were also noted.

TABLE XI

Language Arts Curricula for Project Teachers' Classrooms
As Reported by Frequency on Observational Record

	1	2	3	4	5
Appropriateness of Oral Language Development	1	4	5	2	1
Appropriateness of Oral Discussion	1	2	4	3	3
Adequacy of Oral Summarization	1	3	5	2	2
Frequency of Reading Diagnostics	2	3	5	2	1
Appropriateness of Reading Grouping	1	2	3	4	3
Frequency of Development of Sequential reading Skills	1	3	5	2	2
Appropriateness of Reading Content	0	3	5	4	1
Adequacy of Penmanship	1	3	4	3	2
Appropriateness of Writing Function	2	2	5	3	1
Appropriateness of Spelling Function	2	2	3	3	3

The language arts areas were generally well done by the teachers. The individual teacher's ability in oral communication tended to be related to his skill in developing comminicative language with

the children. One teacher showed consistent difficulty in all areas.

In the use of specific methods it was noted that in the area of reading, many texts were used. Experience storeis, the sight-say method, phonics, the tactile-kinesthetic or multi-sensory approach, sequencing or a combination of methods as used in developmental reading texts and supplementary reading materials were all in evidence. Of the thirteen elementary teachers only one teacher used all of the methods listed above at various times. Nine teachers used two or mor approaches, usually including experience stories or phonics with a developmental reader. Three teachers used only one text and relied on the method as presented in the developmental reading series for all children in the class. These three teachers had three levels of reading in each class. They remained comfortable with the single approach throughout the study. Due to the nature of the groups, particularly the wide CA range, a high proportion of the school day was spent in teaching reading skills. Writing and spelling as skills were taught in the traditional manner with a few exceptions, that is, from manuals or texts in all classrooms with little change at the termination of the project.

In the arithmetic area the emphasis was on concepts of grouping, size, quantity, time, location and use of money in most classrooms. The number and types of devices found in the classrooms were plentiful. In two classrooms there was excessive use of rote drill of facts. In twelve classrooms there was evidence of experience centered learning and use of a variety of methods. In one classroom where there had been rote drill exclusively the lessons were experience centered and practical during the last months as a result of the curriculum development.

TABLE XII

Arithmetic Curricula for Project Teachers' Classrooms
As Reported by Frequency on Observational Record

	1	2	3	4	5
Frequency of Use of Arithmetic Diagnostics	2	3	5	3	0
Frequency of Use of Arithmetic Grouping	1	2	3	4	3
Frequency of Use of Arithmetic Skill Development	1	2	2	5	3
Appropriateness of Arithmetic Content	1	0	3	4	5

In the area of physical development most of the teachers encouraged active participation in recreational and developmental activities. In three classes activities were rigidly confined to the gymnasium or activity rooms. In one classroom where space was limited the teacher requested and received permission for periods of planned outdoor activities. Only five of the teachers participated actively with the children. Two teachers were relieved by physical education teachers who directed the activities.

TABLE XIII

Physical Education and Recreation Curricula for Project Teachers' Classrooms as Reported by Frequency on Observational Record

	1	2	3	4	5
Appropriateness of Level of Activities	0	2	3	3	5
Appropriateness of Type of Activities	1	1	2	4	5

TABLE XIV

Social Studies Curricula for Project Teachers' Classrooms As Reported by Frequency on Observational Record

	1	2	3	4	5
Frequency of Functional Curriculum Content	0	1	2	5	4
Frequency of Child Centered Method	0	0	1	6	6
Encouraging Independence	0	1	3	4	5
Variety in use of Materials	1	1	4	4	3

In the social studies area greatest emphasis was placed on the use of experience units. This was consistent with the expectations of the special education supervisor. Previous in-service work in this

area as well as the reinforcement through the project had carried over into classroom practices. Activities were practical, reflected the future citizenship needs and tended to emphasize acceptable independent behavior and social responsibility.

VI. Curricula Observations - Secondary Level

At the secondary level the classroom methods and techniques were observed in reference to the total school program. Four of the project teachers were assigned to a self contained classroom, five were in departmental programs and four were work-study coordinators. The students at the secondary level participated in physical education, home economics or industrial arts classes and music with children in regular classes.

Development of oral expression, except in isolated instances, was emphasized on the secondary level. Summarization skills were developed though not particularly organized.

TABLE XV

Language Arts Curricula for Project Teachers' Classrooms
As Reported by Frequency on Observational Record

	1	2	3	4	5
Adequacy of Oral Language Expression	1	2	4	4	2
Adequacy of Oral Summarization Techniques	1	4	5	2	1
Frequency of Reading Diagnostics	2	4	4	2	1
Appropriateness of Use of Previously Learned Skills	2	2	3	4	2
Content Appropriateness	2	2	2	4	3
Writing Legibility	3	3	3	2	2
Adequacy of Written Summarization	2	2	3	3	3
Appropriateness of Spelling Techniques	1	2	4	4	2

In observing reading at the secondary level the use of vocationally oriented materials was noted and encouraged where possible. Development of skills or use of previously learned skills implemented in functional context was emphasized. In only two classrooms did the content and methodology resemble that of an elementary room. Both elementary texts and skill builders were used. In the remaining eleven classrooms, reading, regardless of emphasis as a specific skill was included in functional guise and content was of a high interest, low vocabulary level, usually related to occupational information. Reading for information in social studies and science followed by discussion of the information was noted. Re-writing at the students' reading level utilized content for strengthening reading skill.

Teaching of mathematics as a separate subject was observed in two classrooms. One teacher used demonstrations and had active participation of the students in using measurements, etc. The second teacher moved from rote learning and drill in arithmetical processes to use of functional materials such as budgeting and measurement before the end of the project.

Teachers in self contained classrooms or work study situations also taught some mathematics. The basic approach was to present number work as it developed out of social studies units and therefore, tended to be functional and practical in nature.

TABLE XVI

Mathematics Curricula for Project Teachers' Classrooms
As Reported by Frequency on the Observational Record

	1	2	3	4	5
Functionality of Mathematics Content	1	2	5	3	2
Functionality of Method	1	0	6	4	2

Social studies exclusively was taught by three teachers. Two teachers used texts at an appropriate level for most of the students followed by discussions. In addition, one of the two teachers used the experience story approach for rewriting information for the students at an appropriate reading level. Both teachers relied on discussion and promoted participation. The third teacher had a student who could read the text, read orally to the others and then interrogated the group. The content was from a regular class text.

Although not an isolated subject area, social studies was heavily emphasized in all the secondary classrooms. In general this was the area in which most teachers showed their greatest strengths on the secondary level.

TABLE XVII

Social Studies Curricula For Project Teachers' Classrooms
As Reported by Frequency on the Observational Record

	1	2	3	4	5
Content Emphasis of Curriculum	1	2	2	3	5
Utilization of students in Presenting content	1	1	2	5	4
Variety of Materials	1	1	3	4	4

Two teachers taught only science. Both used demonstrations and encouraged participation and spontaneous discussions. The level of interest in both classes was high and content practical. Although not presented as frequentyly as some other subject areas, science was taught in some form in all classes. As in the two special science classes, content was of a practical nature.

TABLE XVIII

Science Curricula for Project Teachers' Classrooms
As Reported by Frequency on the Observational Record

	1	2	3	4	5
Appropriateness of Content	1	2	4	4	2
Utilization of Student in Presenting Content	1	3	3	4	2
Variety of Materials	0	0	4	5	2

The work study groups were observed and evaluated according to the goals set for that particular program. The four teachers involved used vocational information as a central theme in the classroom. Read-

ing was functional to gain practical information. Mathematics was used in study of the use of income, time and measurement. In all of the classes content was appropriate. Positive attitudes toward work were stressed. Self acceptance and social skills were emphasized. In each of the groups individuals were placed in job situations in and out of the school building as appropriate.

To summarize, as previously noted in elementary and secondary class observations, the emphasis on curriculum was practical and functional content, generally emphasizing independence, social adjustment, self evaluation, social studies and vocational goals. A curriculum guide for the county was in rough draft form. Some of the teachers in the project had participated in development of the guide just before the project began. They were encouraged to use the guid-, to add to it and to adapt from other sources as well as to work beyond the social studies area included in the guide.

VII. Teacher-Coordinator Relationships

The rapport between the University faculty and staff and the teachers and supervisors was most satisfactory throughout the length of the project. Teachers were, for the most part, most receptive to suggestions and pleased with their results. County personnel were most helpful in clearing administrative hurdles as well as in improving the lines of communication.

The fact that the project teachers were pursuing certification and were participating in the in-service-internship was one evidence of professional behavior. The teachers reviewed pertinent professional literature and curriculum materials. They participated in adapting methods and making teaching aids. Most of the teachers belonged to one or more professional organizations.

TABLE XIX

Teacher-Coordinator Relationships
As Reported by Frequency on the Observational Record

	1	2	3	4	5
Acceptance of Suggestions	0	2	9	8	7
Interest in Professional Growth	0	0	10	8	8
Level of Academic and Professional Standards	0	3	10	6	5

In addition to the data collected through the Observational Record, two attitude measures were used. The Parental Attitude Research Instrument (PARI) was administered to the experiemental group before and after the two year internship program to measure any significant difference in attitude change. The PARI was also given to the control group at the close of the two year program to measure any difference between the experimental and control group. There have been comparable norms in the literature which include general population samples with somewhat similar educational status. The sample of teachers appeared to be similar in expressed child rearing attitudes to other groups of professionals such as teachers, social workers, rehabilitation hospital staffs and child adjustment students.

In comparing the pre and post test scores of the Experiment Group on the PARI, a significant difference was obtained greater than the .01 level of confidence. (See Tables XX and XXI). It is interesting to note, however, that in comparing the total PARI scores of the Control group and the post PARI scores of the Experimental Group, no significant difference was found.

TABLE XX

Comparison of the Project Pre and Post PARI Scores

	Mean	SD	F
Pre-Project Score	350.77	37.49	
Post-Project Score	335.77	35.11	3.1131 (Significant at .01 level)

TABLE XXI

Comparison of Post-Project and Control PARI Scores

	Mean	SD	F
Post-Project Score	335.77	35.11	
Control Score	312.80	34.89	1,9141 (not significant)

The Attitude Toward Mental Retardation (AMR) designed by

Fliegler and Hebeler (1960) was administered to both the project and control group. The project group was given the AMR prior to and after the two year internship program - the control group took the attitude scale at the end of the two year period. When compared by the total scores there was no significant difference between the Control Group and the Post Experimental Group Scores.

However, since the AMR is specific to mental retardation, the pre and post scores of the Experimental Group were compared by category rather than as a total score. The mean score for each category was established for both the pre and post test situation. A comparison of means yielded significant differences in fifteen of the thirty-three categories at varying levels of significance. The following chart present the data more specifically for each category.

TABLE XXII

A Comparison of the Mean Category Scores Between
The Pre and Post AMR Scores of the Project Teachers

Category	Pre $\bar{X}$	Post $\bar{X}$	t	
Sexaulity	1.52564	1.39102	1.71575	*
Genetic Responsibility	1.24038	1.71153	6.49947	****
Appearance	1.16346	1.6346		
Normalcy of Development	2.86263	2.69780	2.79059	****
Dependency	1.77564	1.74679	.48514	
Independency	2.98717	2.86324	2.43112	**
Aggression	2.125	2.20192	.28014	
Guilt	1.74679	1.46153	6.88063	****
Peer Interaction	2.16783	2.32517	2.13398	**
Concept of Retardation	1.875	2.26282	4.17002	****
Abasement	1.70512	1.70256	.07368	
Comprehension of self	1.76923	2.01282	3.7522	****
Counteraction	3.03846	2.45673	7.38865	****
Education Implication	1.54567	1.62019	1.906	*
Community Provision	1.6	1.61923	.32046	
Emotional-Social Behavior	1.73076	2.24861	8.9876	****
Expression of Affection	3.7	3.75384	.90816	
Suppression of Sex	1.66153	1.66923	.08912	
Encouraging Verbalization	3.47692	3.42307	.62364	
Excluding Outside Influences	2.04615	2.03076	.11934	
Avoidance of Communication	2.07692	2.01538	.31868	
Suppression of Aggression	2.12307	2.00769	1.26284	
Deification of Parent	2.3	2.25384	.33699	
Comradship and Sharing	3.56153	3.41538	1.54739	
Strictness	2.47692	2.56153	.77768	
Breaking the Will	1.91538	1.86923	.57516	
Irritability	2.06043	2.13736	1.16713	
Autonomy of Child	3.60769	3.41538	2.11014	**
Equalitarianism	3.46153	3.2	3.35853	****
Approval of Activity	2.63076	2.60769	.29113	
Fostering of Dependency	2.22307	1.98461	2.41803	*
Acceleration of Development	2.38461	2.43076	.42609	
Achievement	2.77403	2.52403	3.3716	****

* significant at .05 level
** significant at .025 level
*** significant at .010 level
**** significant at .005 level

SUMMARY - CONCLUSIONS AND IMPLICATIONS

The major purpose of the University of Maryland internship and in-service program for teachers of the educable mentally retarded was to provide a format for integrating formal, in-service and intern-teaching experiences as a method of improving the educational practices of non-certified teachers.

As a result of the coursework connected with the project and the internship period, all twenty-six participating teachers were able to meet the State of Maryland requirements for certification in Special Education.

Information recorded in each classroom when reviewed indicated that the merging of the formal courses with the internship could be considered effective with twenty-four of the twenty-six teachers involved. Specific questions of teachers could be approached in a general way in the in-service classes during the actual formal coursework and followed through more specifically by visitation. Problems common to the group served as a basis for intensive study and discussion as the content of the courses was developed. Groups of teachers with common problems were given the opportunity to investigate the varying elements involved and were given direction toward finding some possible solutions. Alternative teaching methods and materials were explored. Individual and group participation allowed a full range of options to be presented and discussed. At the close of the project, almost the total group came to accept the value of working toward a practical, functional curriculum and the continuing development of new skills based on sequential steps. This acceptance was judged to be one of the most important outcomes of the internship phase of the project.

The limitations of this study are the familiar ones that tend to plague projects of this sort. These are primarily limitations of practical situations.

A great deal of the coordinator's time was consumed in traveling to and from the classrooms. The wide variety of curriculum content and level was also challenging to the competencies of one individual. Teachers and coordinator alike wished for more time to procure or make materials, have meetings and to visit with each other.

The modification of behavior that was evident in many of the classrooms seems to indicate that some method of merging formal course work with an internship experience is most beneficial to practicing teachers. It is expected that with increased personnel a project of similar design would be increasingly effective.

Efforts of this type offer implication for pre-service and

post-certification teacher programs as well. Attempts with project designs similar to the University of Maryland's project with these different types of populations should offer interesting results.

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APPENDIX I

Demonstration Project for Teachers of Educable Retarded Children

OBSERVATION RECORD

Teacher code number_____

Number of pupils_____

CA range of pupils_____ Group test_____

MA range of pupils_____ Individual Test_____

Check one:	Elementary	Secondary
	Primary	Junior High
	Intermediate	Senior High
	Both	Work Study

Date_____

Observer_____

I. Classroom - Physical Environment

A. Size

1 2 3 4 5
inadequate — extra room available

B. Lighting

1 2 3 4 5
inadequate — excellent

C. Acoustics

1 2 3 4 5
noisy — sound proof

D. Ventilation

1 2 3 4 5
inadequate — excellent

E. Workspace

1 2 3 4 5
none — spacious

F. Accessibility

1 2 3 4 5
poor location — excellent location

G. Attractiveness

1. Bulletin boards

1 2 3 4 5
not useful — reflect current lessons

1 2 3 4 5
stationary — reflect change

1 2 3 4 5
drab — attractive

2. Teaching aids

1 2 3 4 5
none used — excellent selection in use

Comments:

II. Emotional climate and classroom behavior

A. General classroom atmosphere

1 2 3 4 5
dull — stimulating

B. Pupils

1. Freedom of expression

1 2 3 4 5
none — ample freedom with adequate self control

3. Self discipline

1 2 3 4 5
no control — inner discipline established

C. Teacher

1. Classroom control

1 2 3 4 5
ambivalent — consistent

2. Freedom of expression

1 2 3 4 5
stilted, dull — motivated

3. Freedom of movement

1 2 3 4 5
none — adequate

4. Motivation of discussions

1 2 3 4 5
discouraged — motivated

5. Motivation of participation

1 2 3 4 5
discouraged — encouraged

6. Self-control

1 2 3 4 5
inconsistent — well-integrated

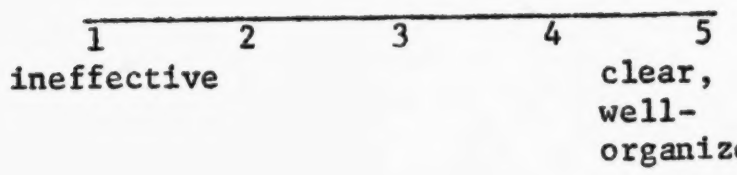
7. Oral communication

1 2 3 4 5
poor language patterns — good language patterns

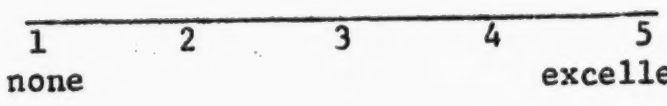
II. (cont'd.)

C. Teacher (cont'd)

8. Written communication

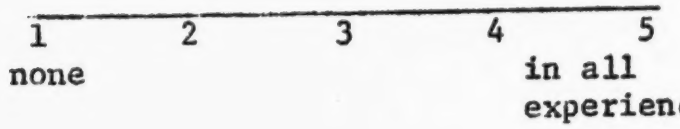


D. Co-operation among peers

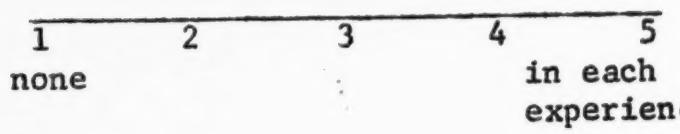


E. Pupil-teacher relations

1. Shared planning



2. Shared evaluations of lessons



III. Instructional organization and efficiency

A. Long range planning

1 2 3 4 5
none — well-organized units

B. Daily planning

1 2 3 4 5
unrelated activities — activities integrated with units

C. Daily schedule

1. Time

1 2 3 4 5
busy work — planned for individual level

2. Level

1 2 3 4 5
inappropriate level — planned for individual level

E. Presentation of assignments

1 2 3 4 5
unclear — clear, well defined

F. Evaluation of assignments

1 2 3 4 5
none — appropriate

G. Allowance for individual work speed

1 2 3 4 5
same time allotted for all — sensitive to individual needs

H. Use of repetition

1 2 3 4 5
unnecessary drill — sensitive to individual needs

I. Use of homework assignments

1 2 3 4 5
busy wor. — appropriate reinforcement

III. Instructional organization and efficiency (cont'd.)

J. Evaluation of pupils' needs:

1. Determines individual level of reading. yes no

   List Method

2. Determines individual strength and weaknesses in reading skills yes no

   List Method

3. Determines individual level of arithmetic skill yes no

   List Method

4. Determines individual strengths and weaknesses in arithmetic skills yes no

   List Method

K. Objective evaluation of pupils work

1)	standard tests	yes	no	
2)	teacher made tests	yes	no	
3)	anecdotal records	yes	no	none observed
4)	progress check list	yes	no	none observed

L. Grades (check one)

_____immediate rewards

_____latent rewards

IV. Curriculum

A. Based on individual needs

1. Interests

1 2 3 4 5
inappropriate interest level — appropriate

2. Assets and disabilities

1 2 3 4 5
disregards abilities and disabilities — plans for abilities and disabilities

B. Based on community needs

1 2 3 4 5
inappropriate — appropriate

C. Based on vocational goals

1 2 3 4 5
unclear — clear and well organized

D. Based on future citizenship

1 2 3 4 5
unclear — clear and well organized

E. Based on developmental sequence

1. Rate

1 2 3 4 5
maintains a single work group — notes individual differences

2. Sequence

1 2 3 4 5
gaps apparent — progression from known to unknown

F. Analyzes principal parts of developmental task for teaching sequentially

1 2 3 4 5
never — always

IV. Curriculum (cont'd.)

G. Presents a variety of experiences relating to similar concepts

1 2 3 4 5

unclear and disorganized — clear and well planned

H. Use of curriculum guides evident in classroom

1. County

2. Other (List)

3. Adapts from several sources (List)

I. Finds new sources of information and teaching materials.

Comments:

V. A. (Elementary Level) Methods and Materials

Check appropriate information:

_____ Self contained classroom

_____ Self contained classroom with

_____ art

_____ physical education

_____ music

_____ other _____

Comments:

I. Language Arts

A. Oral communication

1. Language development

1	2	3	4	5
discourages				stimulates

2. Discussion

1	2	3	4	5
discourages				stimulates

3. Summarization

1	2	3	4	5
lack of organization				gives information sequentially

B. Reading

1. Uses diagnostics

1	2	3	4	5
not evident				for each student

V. A. (Elementary Level) Methods and Materials (cont'd.)

I. Language Arts (cont'd.)

B. Reading (cont'd.)

2. Grouping

1 2 3 4 5

uncertain by needs

3. Develops skills sequentially

1 2 3 4 5

not evident organized

4. Content

1 2 3 4 5

inappropriate functional

5. Methods (check)

_____ experience stories

_____ sight say method

_____ phonics

_____ tactile-kinesthetic (Fernald)

_____ sequencing (anagrams, phrase, sentence building)

6. Materials (list)

Texts:

Supplementary materials:

Teaching Aids:

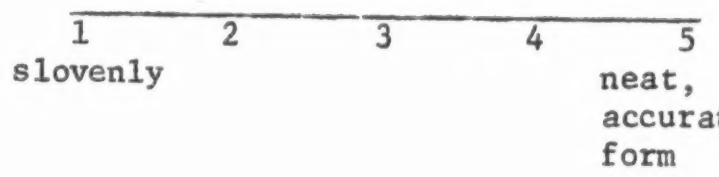
Comments:

V. A. (Elementary Level) Methods and Materials (cont'd.)

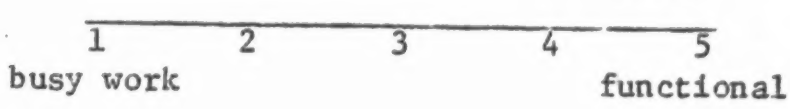
I. Language Arts (cont'd.)

C. Writing

1. Penmanship



2. Use

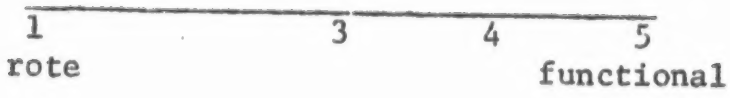


Texts or manuals:

Teaching aids:

Comments:

D. Spelling



Text:

Comments:

V. A. (Elementary Level) Methods and Materials (cont'd.)

II. Arithmetic

1. Uses diagnostics to establish needs

1 2 3 4 5
not evident — for each student

2. Grouping

1 2 3 4 5
none — appropriate as needed

3. Sequential skill development

1 2 3 4 5
not evident — well-organized

4. Context

1 2 3 4 5
inappropriate rate skills — functional material

5. Methods (check)

_____ Rate skills

_____ Concept building (describe

Experience centered activities:

_____ Other _____

Comments:

V. B. (Secondary Level) Methods and Materials

Check appropriate information:

_____ Self contained classroom

_____ Self contained classroom except for:

_____ art

_____ music

_____ home making

_____ shop

_____ physical education

_____ other _____

_____ Departmentalized

area _____

Comments:

1. Language arts

A. Oral expression

1	2	3	4	5
discourages discussion		responds to direct questions		stimulation free expression

Summarization

1	2	3	4	5
disorganized				organized

Comments:

V. B. (Secondary Level) Methods and Materials (cont'd.)

I. Language Arts (cont'd.)

B. Reading

1. Uses diagnostics to establish level and needs

1 2 3 4 5

not evident — for each student

2. Uses previously learned skills

1 2 3 4 5

not evident — in functional use

3. Concent

1 2 3 4 5

inappropriate — appropriate

Texts and supplementary reading material:

Comments:

C. Writing

1. Legibility

1 2 3 4 5

allows slovenly habits — encourages good form & neatness

2. Summarization

1 2 3 4 5

lists by copying — functional, organized

Comments:

V. B. (Secondary Level) Methods and Materials (cont'd.)

I. Language arts (cont'd.)

D. Spelling

1	2	3	4	5
rate				functional

Texts:

Comments:

II. Social Studies

A. Curriculum

1	2	3	4	5
stresses content				stresses practical information

B. Teaching method

1	2	3	4	5
lecture				combination, including student seeking of information

C. Materials

1	2	3	4	5
texts only				variety of sources

Texts:

Comments:

V. B. (Secondary Level) Methods and Materials (cont'd)

III. Science

A. Curriculum

1	2	3	4	5
poor content				appropriate practical tasks

B. Method

1	2	3	4	5
lecture				demonstration and discussion

C. Materials

1	2	3	4	5
texts only				variety in use

Texts:

Comments:

IV. Mathematics

A. Curriculum

1	2	3	4	5
rate processes				functional tasks

B. Method

1	2	3	4	5
rate teaching				in functional context

C. Materials

1	2	3	4	5
texts				variety of aids in use

Texts:

Comments:

V. B. (Secondary Level) Methods and Materials (cont'd.)

V. Physical Education and Recreation

A. Level

1	2	3	4	5
inappropriate to CA				appropriate to CA

B. Activities

1	2	3	4	5
few inappropriate activities				variety of appropriate activities

Comments:

VI. General Comments:

Appropriateness to CA, social age level and interest of students, etc.

VI. General (list and comment)

Units of organization:

Other:

Multi-sensory materials in use:

Variety of materials in use:

Teacher made materials:

Student made materials:

Adapting materials for group use:

VI. General (list and comment) - (cont'd.)

Adapting materials for individual needs:

Balance of quiet and active periods:

Stresses attitudes, values, encourages independent decision making:

Plans and evaluates with pupils:

Comments:

VII. Teacher-Coordinator Relationships

A. Reaction to suggestions

1	2	3	4	5
is offended		accepts suggestions and performs assigned duties		seeks help and cooperates cheerfully

Comments:

B. Professional growth and interest

1	2	3	4	5
seldom seeks new materials		modifies practices if suggestions are made		seeks improved materials & methods

Comments:

C. Academic and professional standards

1	2	3	4	5
accepts low standards				sets high goals

Comments:

D. Areas where help was requested:

VII. Teacher - Coordinator Relationships (cont'd.)

E. Areas where help was needed according to Coordinator, and suggestions were made: